

SEQUENCE LISTING

<110> Cell Signaling Technology, Inc.  
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TAN, Yi

<120> PRODUCTION OF MOTIF-SPECIFIC AND CONTEXT-INDEPENDENT ANTIBODIES USING PEPTIDE LIBRARIES AS AN  
TIGENS

<130> CST-138 CIP2

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<151> 1998-09-04

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<151> 2000-03-24

<160> 145

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<213> Homo sapiens

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<222> (9)..(9)  
<223> PHOSPHORYLATION; threonine at position 9 is phosphorylated

<400> 1

Ile Lys Asp Gly Ala Thr Met Lys Thr Phe Cys Gly Thr Pro  
1 5 10

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<211> 14  
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<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 2

Asp Ala Ala Val Thr Pro Lys Lys Arg His Leu Ser Lys Cys  
1 5 10

<210> 3  
<211> 15  
<212> PRT  
<213> Homo sapiens

<220>  
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<222> (8)..(8)

<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<400> 3

Asp Thr Gln Ile Lys Arg Asn Thr Phe Val Gly Thr Pro Phe Cys  
1 5 10 15

<210> 4

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 4

His Gln Val Val Thr Arg Trp Tyr Arg Cys  
1 5 10

<210> 5

<211> 10

<212> PRT

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<220>

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<222> (7)..(7)

<223> PHOSPHORYLATION; threonine at position 7 is phosphorylated

<400> 5

His Gln Val Leu Met Lys Thr Val Cys Gly  
1 5 10

<210> 6

<211> 14

<212> PRT

<213> Homo sapiens

<220>

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<222> (7)..(7)

<223> PHOSPHORYLATION; threonine at position 7 is phosphorylated

<400> 6

Ile Pro Ile Arg Val Tyr Thr His Glu Val Val Thr Leu Cys  
1 5 10

<210> 7

<211> 15

<212> PRT  
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<220>  
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<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<400> 7

Gly Val Pro Val Arg Thr Tyr Thr His Glu Val Val Thr Leu Cys  
1 5 10 15

<210> 8  
<211> 15  
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<220>  
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<222> (8)..(8)  
<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<400> 8

Asn Gln Val Phe Leu Gly Phe Thr Tyr Val Ala Pro Lys Lys Cys  
1 5 10 15

<210> 9  
<211> 14  
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<213> Homo sapiens

<220>  
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<222> (12)..(12)  
<223> PHOSPHORYLATION; threonine at position 12 is phosphorylated

<400> 9

Lys Glu His Met Met Asp Gly Val Thr Thr Arg Thr Phe Cys  
1 5 10

<210> 10  
<211> 15  
<212> PRT  
<213> Homo sapiens

<220>  
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<223> PHOSPHORYLATION; threonine at position 7 is phosphorylated

<220>  
<221> MOD\_RES  
<222> (9)..(9)

<223> PHOSPHORYLATION; tyrosine at position 9 is phosphorylated

<400> 10

Asp His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Cys  
1 5 10 15

<210> 11

<211> 15

<212> PRT

<213> Homo sapiens

<220>

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<222> (5)..<sup>—</sup>(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<220>

<221> MOD\_RES

<222> (9)..<sup>—</sup>(9)

<223> PHOSPHORYLATION; serine at position 9 is phosphorylated

<400> 11

Glu Leu Leu Pro Thr Pro Pro Leu Ser Pro Ser Arg Arg Ser Cys  
1 5 10 15

<210> 12

<211> 17

<212> PRT

<213> Homo sapiens

<220>

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<222> (10)..<sup>—</sup>(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>

<221> MOD\_RES

<222> (12)..<sup>—</sup>(12)

<223> PHOSPHORYLATION; tyrosine at position 12 is phosphorylated

<400> 12

Leu Ala Arg His Thr Asp Asp Glu Met Thr Gly Tyr Val Ala Thr Arg  
1 5 10 15

Cys

<210> 13

<211> 15

<212> PRT

<213> Homo sapiens

<220>  
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<222> (5)..(5)  
<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<220>  
<221> MOD\_RES  
<222> (7)..(7)  
<223> PHOSPHORYLATION; tyrosine at position 7 is phosphorylated

<400> 13

Ser Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg Cys  
1 5 10 15

<210> 14  
<211> 14  
<212> PRT  
<213> Homo sapiens

<220>  
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<223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>  
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<222> (11)..(11)  
<223> Xaa at position 11 is arginine or lysine

<220>  
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<222> (1)..(14)  
<223> Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20 amino acids except cysteine

<400> 14

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa  
1 5 10

<210> 15  
<211> 14  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (8)..(8)  
<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>  
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<222> (1)..(14)

<223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 15

Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa  
1 5 10

<210> 16

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (1)..(14)

<223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 16

Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa  
1 5 10

<210> 17

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (8)..(8)

<223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (1)..(14)

<223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 17

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa  
1 5 10

<210> 18

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (8)..(8)

<223> Xaa at position 8 is serine or threonine

<220>  
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<222> (1)..(14)  
<223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 18

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa  
1 5 10

<210> 19  
<211> 14  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC FEATURE  
<222> (5)..(5)  
<223> Xaa at position 5 is aspartic acid or glutamic acid

<220>  
<221> MISC FEATURE  
<222> (8)..(8)  
<223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>  
<221> MISC FEATURE  
<222> (1)..(14)  
<223> Xaa at positions 1-4, 6-7, and 9-13 = any one of the 20 amino acids except cysteine

<400> 19

Xaa Cys  
1 5 10

<210> 20  
<211> 13  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC FEATURE  
<222> (7)..(7)  
<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>  
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<222> (8)..(10)  
<223> Xaa at positions 8-10 is aspartic acid or glutamic acid

<220>  
<221> MISC FEATURE  
<222> (1)..(13)

<223> Xaa at positions 1-6, and 11-13 = any one of the 20 amino acids except cysteine

<400> 20

Xaa  
1 5 10

<210> 21

<211> 15

<212> PRT

<213> Homo sapiens

<220>

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<222> (9)..(9)

<223> Xaa at position 9 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (10)..(10)

<223> Xaa at position 10 is phenylalanine or tyrosine

<220>

<221> MISC FEATURE

<222> (1)..(14)

<223> Xaa at positions 1-4, 6-7, and 11-14 = any one of the 20 amino acids except cysteine

<400> 21

Xaa Xaa Xaa Xaa Phe Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Cys  
1 5 10 15

<210> 22

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (5)..(5)

<223> Xaa at position 5 is arginine or lysine

<220>

<221> MISC FEATURE

<222> (7)..(7)

<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (1)..(13)

<223> Xaa at positions 1-4, 6, and 8-13 = any one of the 20 amino acids except cysteine

<400> 22

Xaa Cys  
1 5 10

<210> 23

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC\_FEATURE

<222> (7)..(7)

<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (4)..(4)

<223> Xaa at position 4 is arginine or lysine

<220>

<221> MISC\_FEATURE

<222> (1)..(13)

<223> Xaa at positions 1-3, 5-6, and 8-13 = any one of the 20 amino acids except cysteine

<400> 23

Xaa Cys  
1 5 10

<210> 24

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC\_FEATURE

<222> (7)..(7)

<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (8)..(8)

<223> Xaa at position 8 is phenylalanine or isoleucine or methionine

<220>

<221> MISC\_FEATURE

<222> (1)..(13)

<223> Xaa at positions 1-6, and 9-13 = any one of the 20 amino acids except cysteine

<400> 24

Xaa Cys  
1 5 10

<210> 25  
<211> 14  
<212> PRT  
<213> Homo sapiens

<220>  
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<222> (7)..(7)  
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<220>  
<221> MISC FEATURE  
<222> (8)..(8)  
<223> Xaa at position 8 is phenylalanine or isoleucine

<220>  
<221> MISC FEATURE  
<222> (1)..(13)  
<223> Xaa at positions 1-6, and 9-13 = any one of the 20 amino acids ex  
cept cysteine

<400> 25

Xaa Cys  
1 5 10

<210> 26  
<211> 15  
<212> PRT  
<213> Homo sapiens  
<220>  
<221> MISC FEATURE  
<222> (7)..(7)  
<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>  
<221> MISC FEATURE  
<222> (1)..(14)  
<223> Xaa at positions 1-6, and 9-14= any one of the 20 amino acids exc  
ept cysteine

<400> 26

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Cys  
1 5 10 15

<210> 27  
<211> 15  
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<213> Homo sapiens

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<220>  
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<223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 27

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Cys  
1 5 10 15

<210> 28  
<211> 14  
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<220>  
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<222> (7)..(7)  
<223> Xaa at position 7 is serine or threonine

<220>  
<221> MISC FEATURE  
<222> (1)..(13)  
<223> Xaa at positions 1-6, and 8-13 = any one of the 20 amino acids except cysteine

<400> 28

Xaa Cys  
1 5 10

<210> 29  
<211> 15  
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<213> Homo sapiens

<220>  
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<222> (8)..(8)  
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<220>  
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<222> (11)..(11)  
<223> Xaa at position 11 is arginine or lysine

<220>  
<221> MISC FEATURE  
<222> (1)..(14)

<223> Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20 amino acids except cysteine

<400> 29

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Cys  
1 5 10 15

<210> 30

<211> 15

<212> PRT

<213> Homo sapiens

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<221> MOD\_RES

<222> (6)\_.(6)

<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 30

Val Ile Pro Pro His Thr Pro Val Arg Thr Val Met Asn Thr Cys  
1 5 10 15

<210> 31

<211> 10

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (5)\_.(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 31

Ser Val Ala Lys Thr Met Asp Ala Gly Cys  
1 5 10

<210> 32

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (10)\_.(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<400> 32

Arg Ile Tyr Ser Tyr Gln Met Ala Leu Thr Pro Val Val Val Lys Cys  
1 5 10 15

<210> 33

<211> 15

<212> PRT  
<213> Homo sapiens  
  
<220>  
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<222> (8)..(8)  
<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>  
<221> MISC\_FEATURE  
<222> (1)..(14)  
<223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 33

Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa Cys  
1 5 10 15

<210> 34  
<211> 15  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MISC\_FEATURE  
<222> (1)..(14)  
<223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 34

Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa Cys  
1 5 10 15

<210> 35  
<211> 15  
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<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (7)..(7)  
<223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<400> 35

Gly Leu Tyr Arg Ser Pro Ser Met Pro Glu Asn Leu Asn Arg Cys  
1 5 10 15

<210> 36  
<211> 15  
<212> PRT  
<213> Homo sapiens

<400> 36

Gly Leu Tyr Arg Ser Pro Ser Met Pro Glu Asn Leu Asn Arg Cys  
1 5 10 15

<210> 37  
<211> 15  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (7)..(7)  
<223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<400> 37

Thr Arg Ser Arg His Ser Ser Tyr Pro Ala Gly Thr Glu Glu Cys  
1 5 10 15

<210> 38  
<211> 15  
<212> PRT  
<213> Homo sapiens

<400> 38

Thr Arg Ser Arg His Ser Ser Tyr Pro Ala Gly Thr Glu Glu Cys  
1 5 10 15

<210> 39  
<211> 15  
<212> PRT  
<213> Homo sapiens

<400> 39

Phe Arg Gly Arg Ser Arg Ser Ala Pro Pro Asn Leu Trp Ala Cys  
1 5 10 15

<210> 40  
<211> 15  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (7)..(7)  
<223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<400> 40

Phe Arg Gly Arg Ser Arg Ser Ala Pro Pro Asn Leu Trp Ala Cys  
1 5 10 15

<210> 41  
<211> 15

<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC FEATURE  
<222> (8)..(8)  
<223> Xaa at position 8 is serine or threonine

<220>  
<221> MISC\_FEATURE  
<222> (1)..(14)  
<223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 41

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Cys  
1 5 10 15

<210> 42  
<211> 15  
<212> PRT  
<213> Homo sapiens

<220>  
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<222> (8)..(8)  
<223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>  
<221> MISC\_FEATURE  
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<223> Xaa at position 11 is arginine or lysine

<220>  
<221> MISC FEATURE  
<222> (1)..(14)  
<223> Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20 amino acids except cysteine

<400> 42

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Cys  
1 5 10 15

<210> 43  
<211> 15  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (8)..(8)  
<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<400> 43

Ser Pro Tyr Lys Phe Pro Ser Ser Pro Leu Arg Ile Pro Gly Cys  
1 5 10 15

<210> 44

<211> 15

<212> PRT

<213> Homo sapiens

<400> 44

Val Ile Pro Pro His Thr Pro Val Arg Thr Val Met Asn Thr Cys  
1 5 10 15

<210> 45

<211> 14

<212> PRT

<213> Homo sapiens

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<222> (10)..(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(14)

<223> Xaa at positions 2-4, 6, 8-9, 11-14 = any one of the 20 amino acids except cysteine

<400> 45

Cys Xaa Xaa Xaa Arg Xaa Arg Xaa Xaa Thr Xaa Xaa Xaa Xaa  
1 5 10

<210> 46

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD RES

<222> (10)..(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(14)

<223> Xaa at positions 2-6, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 46

Cys Xaa Xaa Xaa Xaa Xaa Arg Arg Xaa Thr Xaa Xaa Xaa Xaa  
1 5 10

<210> 47  
<211> 15  
<212> PRT  
<213> Homo sapiens  
  
<220>  
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<222> (9)..(9)  
<223> Xaa at position 9 is phosphoserine or phosphothreonine

<220>  
<221> MISC\_FEATURE  
<222> (10)..(10)  
<223> Xaa at position 10 is phenylalanine or tyrosine

<220>  
<221> MISC FEATURE  
<222> (1)..(14)  
<223> Xaa at positions 1-4, 6-7, and 11-14 = any one of the 20 amino acids except cysteine

<400> 47  
  
Xaa Xaa Xaa Xaa Phe Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Cys  
1 5 10 15

<210> 48  
<211> 8  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 48  
  
Arg Gln Arg Ser Thr Ser Thr Pro  
1 5

<210> 49  
<211> 8  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 49  
  
Lys Gly Arg Thr Trp Thr Leu Cys

1 5

<210> 50  
<211> 8  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 50  
  
Arg Pro Arg Thr Thr Ser Phe Ala  
1 5

<210> 51  
<211> 8  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 51  
  
Arg Arg Arg Thr Ser Ser Phe Ala  
1 5

<210> 52  
<211> 8  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 52  
  
Arg Arg Arg Ala Ala Ser Met Asp  
1 5

<210> 53  
<211> 8  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 53

Arg Ile Arg Thr Gln Ser Phe Ser  
1 5

<210> 54

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (6)..(6)

<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 54

Arg Glu Arg Lys Arg Thr Val Trp  
1 5

<210> 55

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (6)..(6)

<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 55

Lys Asp Arg Gln Gly Thr His Lys  
1 5

<210> 56

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (6)..(6)

<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 56

Arg Asp Arg Asn Gly Thr His Leu  
1 5

<210> 57

<211> 8

<212> PRT

<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (6)\_.(6)  
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 57

Lys Leu Arg Leu Ser Thr Asp Tyr  
1 5

<210> 58  
<211> 8  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (6)\_.(6)  
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 58

Arg Asp Lys Ser Val Thr Asp Ser  
1 5

<210> 59  
<211> 8  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (6)\_.(6)  
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 59

Arg Leu Arg Lys Ser Ser Ser Tyr  
1 5

<210> 60  
<211> 8  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (6)\_.(6)  
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 60

Arg Pro Arg Ser Cys Thr Trp Pro  
1 5

<210> 61  
<211> 8  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (6)\_.(6)  
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 61  
  
Arg Arg Arg Ala Ala Ser Met Asp  
1 5

<210> 62  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (4)\_.(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 62  
  
Arg Phe Phe Thr Arg  
1 5

<210> 63  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (4)\_.(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 63  
  
Arg Thr Tyr Thr Leu  
1 5

<210> 64  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (4)\_.(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 64

Lys Arg Ser Thr Met  
1 5

<210> 65

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 65

Arg Arg Arg Ser Ser  
1 5

<210> 66

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 66

Arg Arg Pro Ser Tyr  
1 5

<210> 67

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 67

Arg Thr Tyr Thr His  
1 5

<210> 68

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 68

Arg Ser Pro Ser Met  
1 5

<210> 69  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 69

Arg Lys Arg Thr Val  
1 5

<210> 70  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 70

Arg Gln Gly Thr His  
1 5

<210> 71  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 71

Arg Ser Leu Thr Glu  
1 5

<210> 72

<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 72

Arg Gln Glu Thr Val  
1 5

<210> 73  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 73

Arg Ala Tyr Thr His  
1 5

<210> 74  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 74

Lys Arg Asp Thr Phe  
1 5

<210> 75  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 75

Lys Ser Val Thr Asp  
1 5

<210> 76  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 76

Arg Lys Ser Ser Ser  
1 5

<210> 77  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 77

Arg Ser Cys Thr Tyr  
1 5

<210> 78  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 78

Phe Phe Thr Arg His  
1 5

<210> 79  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (3)..(3)

<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 79

Thr Trp Thr Leu Cys  
1 5

<210> 80

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 80

Gln Arg Ser Phe Val  
1 5

<210> 81

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 81

Ala Tyr Ser Phe Cys  
1 5

<210> 82

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 82

Gly Tyr Ser Phe Val  
1 5

<210> 83

<211> 5

<212> PRT

<213> Homo sapiens  
<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 83

Thr Thr Ser Phe Ala  
1 5

<210> 84  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 84

Thr Ser Ser Phe Ala  
1 5

<210> 85  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 85

Val Tyr Thr His Glu  
1 5

<210> 86  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 86

Thr Tyr Thr His Glu  
1 5

<210> 87  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 87  
  
Ala Tyr Thr His Gln  
1 5

<210> 88  
<211> 15  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD RES  
<222> (10)..(10)  
<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>  
<221> MISC FEATURE  
<222> (2)..(15)  
<223> At positions 2-4, 6, 9, and 13-15, X = any amino acid except C and W; At position 8, X = any amino acid except C and W and is biased 50% to T; At position 11, X = any amino acid except C and W and is biased 50% to F; At position 12, X = any amino acid except C and W and is biased 50% to G.

<400> 88  
  
Cys Xaa Xaa Xaa Arg Xaa Arg Xaa Xaa Thr Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

<210> 89  
<211> 13  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD RES  
<222> (7)..(7)  
<223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<220>  
<221> MISC FEATURE  
<222> (2)..(13)  
<223> At positions 2-4, 11-13, X = any amino acid except C, W or Y; At positions 5-6 and 9-10, X = K or R; At position 8, X = F, L, or V.

<400> 89

Cys Xaa Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10

<210> 90

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(6)

<223> At positions 2, 4, and 6, X = any amino acid; At position 3, X = Y or F

<400> 90

Arg Xaa Xaa Xaa Ser Xaa Pro  
1 5

<210> 91

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (8)..(8)

<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>

<221> MISC FEATURE

<222> (1)..(13)

<223> At positions 1-3, 5, 7, 9, and 11-13, X = any amino acid except cysteine; At position 6, X = F or Y.

<400> 91

Xaa Xaa Xaa Arg Xaa Xaa Xaa Ser Xaa Pro Xaa Xaa Xaa Cys  
1 5 10

<210> 92

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (9)..(9)

<223> PHOSPHORYLATION; threonine at position 9 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(16)

<223> At positions 2-7 and 12-16, X = any amino acid except C; At position 11, X = D or E

<400> 92

Cys Xaa Xaa Xaa Xaa Xaa Xaa Leu Thr Gln Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

<210> 93

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (9)..(9)

<223> PHOSPHORYLATION; serine at position 9 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(16)

<223> At positions 2-7 and 12-16, X = any amino acid except C; At position 11, X = D or E

<400> 93

Cys Xaa Xaa Xaa Xaa Xaa Xaa Leu Ser Gln Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

<210> 94

<211> 13

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (8)..(8)

<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(13)

<223> At positions 2-4, 7, 9, and 11-13, X= any amino acid except C

<400> 94

Cys Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa  
1 5 10

<210> 95  
<211> 8  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD RES  
<222> (6)..(6)  
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<220>  
<221> MISC FEATURE  
<222> (2)..(8)  
<223> At positions 2 and 4-5, X = any amino acid

<400> 95

Phe Xaa Arg Xaa Xaa Thr Phe Phe  
1 5

<210> 96  
<211> 17  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD RES  
<222> (10)..(10)  
<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>  
<221> MISC FEATURE  
<222> (2)..(8)  
<223> At positions 2 and 16-17, X = any amino acid except C and W; At positions 3-4, X = any amino acid except C and W and is biased 50% to R; At position 6, X = any amino acid except C and W and is biased 50% to K; At position 8, X = any amino acid except C and W and is biased 50% to Q

<220>  
<221> MISC FEATURE  
<222> (9)..(17)  
<223> At position 9, X = any amino acid except C and W and is biased 50% to G; At position 13, X = any amino acid except C and W and is biased 50% to Y; At positions 14-15, X = any amino acid except C and W and is biased 50% to F

<400> 96

Cys Xaa Xaa Xaa Phe Xaa Arg Xaa Xaa Thr Phe Phe Xaa Xaa Xaa  
1 5 10 15

Xaa

<210> 97  
<211> 6  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; tyrosine at position 3 is phosphorylated

<220>  
<221> MISC\_FEATURE  
<222> (5)..(5)  
<223> At position 5, X = any amino acid

<400> 97

Val Ile Tyr Ala Xaa Pro  
1 5

<210> 98  
<211> 15  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (8)..(8)  
<223> PHOSPHORYLATION; tyrosine at position 8 is phosphorylated

<220>  
<221> MISC\_FEATURE  
<222> (2)..(15)  
<223> At positions 2-3, 5, and 13-15, X = any amino acid except C and W  
: At positions 4 and 10, X = any amino acid except C and W and  
is biased 50% to A; At position 12, X = any amino acid except C a  
nd W and is biased 50% to F

<400> 98

Cys Xaa Xaa Xaa Xaa Val Ile Tyr Ala Xaa Pro Xaa Xaa Xaa Xaa  
1 5 10 15

<210> 99  
<211> 9  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<220>  
<221> MISC\_FEATURE

<222> (2)..(7)

<223> At positions 2-4 and 7, X = any amino acid

<400> 99

Lys Xaa Xaa Xaa Thr Pro Xaa His Arg  
1 5

<210> 100

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (8)..(8)

<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(14)

<223> At positions 2-3 and 13-14, X = any amino acid except C and W; At positions 5-6, X = any amino acid except C and W and is biased 50% to H; At positions 7 and 10, X = any amino acid except C and W and is biased 50% to K

<400> 100

Cys Xaa Xaa Lys Xaa Xaa Xaa Thr Pro Xaa His Arg Xaa Xaa  
1 5 10

<210> 101

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (8)..(8)

<223> PHOSPHORYLATION; tyrosine at position 8 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(14)

<223> At positions 2-4 and 13-14, X = any amino acid except C and W; At positions 5-7, X = any amino acid except C and W and is biased 50% to E and D; At position 10, X = any amino acid except C and W and is biased 50% to M; At position 12, X = any amino acid except C and W and is biased 50% to F

<400> 101

Cys Xaa Xaa Xaa Xaa Xaa Tyr Met Xaa Met Xaa Xaa Xaa  
1 5 10

<210> 102  
<211> 4  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (1)..(2)  
<223> PHOSPHORYLATION; tyrosine at position 1 is phosphorylated

<220>  
<221> MISC\_FEATURE  
<222> (3)..(3)  
<223> At position 3, X = any amino acid

<400> 102

Tyr Met Xaa Met  
1

<210> 103  
<211> 15  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (9)..(9)  
<223> PHOSPHORYLATION; tyrosine at position 9 is phosphorylated

<220>  
<221> MISC\_FEATURE  
<222> (2)..(15)  
<223> At positions 2-7, 11, and 13-15, X = any amino acid except C and W; At position 8, X = any amino acid except C and W and is biased 50% to E

<400> 103

Cys Xaa Xaa Xaa Xaa Xaa Xaa Tyr Met Xaa Xaa Xaa Xaa  
1 5 10 15

<210> 104  
<211> 6  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<220>  
<221> MISC FEATURE  
<222> (3)..(3)  
<223> At position 3, X = any amino acid

<400> 104

Arg Gln Xaa Thr Phe Asp  
1 5

<210> 105

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (8)..(8)

<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(15)

<223> At positions 2-3 and 13-15, X = any amino acid except C and W; At position 4, X = any amino acid except C and W and is biased 50% to K; At position 7, X = any amino acid except C and W and is biased 50% to Q; At position 11, X = any amino acid except C and W and is biased 50% to L

<220>

<221> MISC FEATURE

<222> (12)..(12)

<223> At position 12, X = any amino acid except C and W and is biased 50% to F

<400> 105

Cys Xaa Xaa Xaa Arg Gln Xaa Thr Phe Asp Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

<210> 106

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> PHOSPHORYLATION; tyrosine at position 4 is phosphorylated

<220>

<221> MISC\_FEATURE

<222> (2)..(2)

<223> At position 2, X = any amino acid

<400> 106

Glu Xaa Ile Tyr Gly Glu Phe  
1 5

<210> 107  
<211> 16  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (9)..(9)  
<223> PHOSPHORYLATION; tyrosine at position 9 is phosphorylated

<220>  
<221> MISC\_FEATURE  
<222> (2)..(16)  
<223> At positions 2-4 and 13-16, X = any amino acid except C and W; At positions 5 and 7, X = any amino acid except C and W and is biased 50% to E

<400> 107

Cys Xaa Xaa Xaa Xaa Glu Xaa Ile Tyr Gly Glu Phe Xaa Xaa Xaa Xaa  
1 5 10 15

<210> 108  
<211> 4  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> PHOSPHORYLATION; serine at position 1 is phosphorylated

<220>  
<221> MISC\_FEATURE  
<222> (4)..(4)  
<223> At position 4, X = K or R

<400> 108

Ser Pro Arg Xaa  
1

<210> 109  
<211> 16  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (9)..(9)  
<223> PHOSPHORYLATION; serine at position 9 is phosphorylated

<220>  
<221> MISC\_FEATURE

<222> (2)..(16)  
<223> At positions 2-4 and 14-16, X = any amino acid except C and W; At positions 5-7, X = any amino acid except C and W and is biased 50% to H; At position 8, X = any amino acid except C and W and is biased 50% to K and R; At position 13, X = any amino acid except C and W and is biased 50% to R

<400> 109

Cys Xaa Xaa Xaa Xaa Xaa Xaa Ser Pro Arg Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

<210> 110  
<211> 6  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> PHOSPHORYLATION; threonine at position 1 is phosphorylated

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<220>  
<221> MISC FEATURE  
<222> (3)..(4)  
<223> At positions 3-4, X = any amino acid

<400> 110

Thr Pro Xaa Xaa Ser Pro  
1 5

<210> 111  
<211> 18  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (8)..(8)  
<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<220>  
<221> MOD\_RES  
<222> (12)..(12)  
<223> PHOSPHORYLATION; serine at position 12 is phosphorylated

<220>  
<221> MISC FEATURE  
<222> (2)..(18)

<223> At positions 2, 4, and 14-18, X = any amino acid except C and W;  
At position 3, X = any amino acid except C and W and is biased  
50% to P and F; At positions 5-6 and 11, X = any amino acid exce  
pt C and W and is biased 50% to P and L; At positions 7 and 10,  
X = any amino acid except C and W and is biased 50% to P

<400> 111

Cys Xaa Xaa Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Ser Pro Xaa Xaa Xaa  
1 5 10 15

Xaa Xaa

<210> 112

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (8)..(8)

<223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>

<221> MISC FEATURE

<222> (2)..(15)

<223> At positions 2-6 and 10-15, X = any amino acid except C and W

<400> 112

Cys Xaa Xaa Xaa Xaa Xaa Pro Ser Pro Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

<210> 113

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 113

Lys Arg Arg Arg Ser Ser Lys Asp  
1 5

<210> 114

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES  
<222> (5)..(5)  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 114

Lys Arg Lys Arg Ser Arg Lys Glu  
1 5

<210> 115  
<211> 8  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 115

Ser Arg Arg Pro Ser Tyr Arg Lys  
1 5

<210> 116  
<211> 8  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 116

Gly Trp Lys Asn Ser Ile Arg His  
1 5

<210> 117  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 117

Gly Leu Thr Val Lys  
1 5

<210> 118

<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 118

Leu Ala Thr Val Lys  
1 5

<210> 119  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 119

Phe Phe Thr Arg His  
1 5

<210> 120  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 120

Pro Leu Thr Pro Arg  
1 5

<210> 121  
<211> 5  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 121

Asn Val Thr Met Arg  
1 5

<210> 122  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 122

Ala Val Thr Pro Lys  
1 5

<210> 123  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 123

Pro Leu Ser Gln Glu  
1 5

<210> 124  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 124

Tyr Pro Ser Gln Glu  
1 5

<210> 125  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (3)..(3)

<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 125

Val Ser Thr Gln Glu  
1 5

<210> 126

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (3)..<sup>-</sup>(3)

<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<220>

<221> MOD\_RES

<222> (5)..<sup>-</sup>(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 126

Ser Val Thr Gln Ser Gln Gly  
1 5

<210> 127

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (3)..<sup>-</sup>(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 127

Pro Ile Ser Gln Asn  
1 5

<210> 128

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (3)..<sup>-</sup>(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 128

Ser Phe Ser Gln Pro

1

5

<210> 129  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 129

Ser Ser Ser Gln Pro  
1 5

<210> 130  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 130

Asp Leu Ser Gln Val  
1 5

<210> 131  
<211> 5  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 131

Ser Leu Ser Gln Gly  
1 5

<210> 132  
<211> 7  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 132

Tyr Arg Ser Pro Ser Met Pro  
1 5

<210> 133

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 133

Gly Arg Ser Arg Ser Ala Pro  
1 5

<210> 134

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 134

Pro Arg Thr Thr Ser Phe Ala  
1 5

<210> 135

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 135

Ser Arg His Ser Thr Tyr Pro  
1 5

<210> 136

<211> 7

<212> PRT

<213> Homo sapiens

<220>  
<221> MOD RES  
<222> (5)..(5)  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 136

Gln Arg Ser Thr Ser Thr Pro  
1 5

<210> 137  
<211> 7  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD RES  
<222> (5)..(5)  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 137

Leu Arg Ser Ile Ser Leu Pro  
1 5

<210> 138  
<211> 6  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 138

Phe Leu Gly Phe Ser Tyr  
1 5

<210> 139  
<211> 6  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 139

Phe Ser Asn Phe Ser Phe  
1 5

<210> 140  
<211> 6  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (5)..<sup>-(5)</sup>  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 140  
  
Phe Arg Asn Phe Ser Tyr  
1 5

<210> 141  
<211> 6  
<212> PRT  
<213> Homo sapiens  
  
<220>  
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<222> (5)..<sup>-(5)</sup>  
<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 141  
  
Phe Gln Gly Phe Thr Tyr  
1 5

<210> 142  
<211> 6  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (5)..<sup>-(5)</sup>  
<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 142  
  
Phe Ala Gly Phe Ser Tyr  
1 5

<210> 143  
<211> 6  
<212> PRT  
<213> Homo sapiens  
  
<220>  
<221> MOD\_RES  
<222> (5)..<sup>-(5)</sup>  
<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 143

Phe Leu Gly Phe Thr Tyr  
1 5

<210> 144

<211> 6

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (5)\_.(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 144

Phe Ser His Phe Thr Phe  
1 5

<210> 145

<211> 6

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (5)\_.(5)

<223> PHOSPHORYLATION; serine at position 5 is phosphorylated

<400> 145

Phe Pro Gln Phe Ser Tyr  
1 5